RESPONSE TO REVIEWERS’ COMENTS

First, I want to thank the two reviewers for the very insightful comments and suggestions made on the Manuscript. The suggestions and the reference journals have in very significant way been helpful for me.

I should like to respond to the following comments and suggestions from the Reviewers:

1. *Reviewer: Line 50: " Corn production in many counties of the wold " should be " Corn production in many countries of the world "*

Response: The typographical errors have been corrected (line 50)

1. *Reviewer: Please uniform spacing before/after section. For example, line spacing in*

*Results and discussion, line 138-147*.

Response: The line spacing have been fixed in accordance with the journal specification (line 138 – 148).

1. *Reviewer: Figures 5 and 6: Why the concentration of MG (5.2 x 10-3 mol/dm3) different than initial concentration of MG (13.6 x 10-6 mol/dm3)?*

Response: The former ought to be the initial concentration of MG in g/dm3. The error has been corrected and the concentration are now written in mol/dm3 in all cases (see captions of Figs. 5 and 6)

1. *Reviewer: Line 192-207: Based on a comparison of the thermodynamic parameters calculated from the Freundlich constant (dimensionless) and Langmuir constant (dimensionless), concluded that the signs and magnitudes of* Δ*G,* Δ*H, and* Δ*S calculated from KF were consistent with those calculated from KL. Of course, the experimental data in the adsorption isotherms must be fitted well Freundlich models, and the R2 value of the van't Hoff equation must be higher than 0.90. It is also evident that, to some extent, the application of KF to estimate the thermodynamic parameters should be approached with caution. Namely, The Freundlich constant KF can be obtained as a dimensionless value using equations in reference: Mistakes and inconsistencies regarding adsorption of contaminants from aqueous solutions: A critical review, Water Research 120 (2017) 88-116*
2. Response: Based on this suggestion the values of ΔHo and ΔSo were recalculated using Eq. (90) of the paper “Mistakes and inconsistencies regarding adsorption of contaminants from aqueous solutions: A critical review, Water Research 120 (2017) 88-116,” using the mean values 1/n for each adsorbent. It was found that the calculated values of enthalpy and entropy changes are identical to those reported in the manuscript in all cases.
3. *Reviewer: Table I and II: Mean n and Kad do not present parameters of the van t Hoff equation, as indicate in the title of Tables. Please, better define the title of the Table.*

Response: The suggestion is appreciated and the error is now corrected (see lines 223, 224, 236 and 237).

1. *Reviewer: Page 4, line 92: without shaking. This is a MAJOR problem. Usually, if no stirring or shaking is applied, the adsorption data are not accurate, since the contact between adsorbate and adsorbent is partial. Is this a typing mistake*?

Response: The error in the in description of what was actually done is now corrected in line 91 – 93. It now reads, ”The mixtures were shaken, then left to equilibrate for about six hours in a thermostated water bath maintained at constant temperature between 5 – 30 oC.”

1. *Reviewer: Thermodynamic treatment is problematic. If Freundlich isotherm is applied with success, than an energetically heterogeneous surface is assumed. Hence, there can be* ***no single*** *ΔH value. A relation K=K0exp(-ε0/RT) is valid, but here ε0 is not ΔH, but a characteristic value of the energy distribution F(ε). A detailed consideration is given in Monatshefte fur Chemie 115, 997--1012 (1984), which is attached to this review*.

Response: Though the surface is heterogeneous, the assumption of single ΔHo for the system should be valid since ΔHo value can be taken to be single statistical average of ε0 energy distribution of the interaction of MG with the adsorbent in the adsorption process.

1. *Reviewer: If eq (3) is to be used, although it is correct only when K is the true equilibrium constant, ΔG0 should be used. ΔG=0 for equilibrium, which is presumed for every isotherm point. Authors should consider all this and completely adjust their calculations and discussion.*

Response: The mistake has been corrected and the changes are now reflected in the manuscript.

1. *Finally, there are some issues with units (like μmol. dm-3), units are not written as demanded by the journal, in text and on graphs…..*

Response: In all cases where units like like μmol. dm-3 were used, the units have been changed in conformity with journal requirement. For example, μ has been changed to

x 10-6.